Manitoba
Agriculture

nformation Update

Guidelines For Estimating
Cow-Calf
Production Costs
Based on a 150 Head Cow Herd

DATE: September, 2000

This guide is designed to provide you with planning information and a format for calculating costs of production of a cow-calf enterprise. The production costs included in this enterprise budget are not intended as a cost study of the beef industry in Manitoba.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time; or comparing the plan with the actual production at the end of the planning period. Fixed costs are based on estimates of new costs.

The budget may be adjusted by putting your figures in the appropriate column. Each cow-calf producer is encouraged to determine their own costs of production based on their own inputs, pasture program, and management.

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Cow-Calf Production Costs
Based on a 150 Cow Herd

A. Operating Costs	$/Cow	Total	Your Cost
1. Feed Costs			
1.01 Grain	7.51	1,127	
1.02 Hay	133.00	19,950	
1.03 Salt & Minerals	17.85	2,678	
Total Feed Cost	**$158.36**	**$23,755**	
2. Other Operating Costs			
2.01 Straw	15.00	2,250	
2.02 Veterinary Medicine & Supplies	19.08	2,861	
2.03 Breeding Costs	24.15	3,623	
2.04 Fuel, Maintenance & Repairs	23.33	3,500	
2.05 Utilities	14.00	2,100	
2.06 Marketing & Transportation	24.87	3,731	
2.07 Death Loss	14.00	2,100	
2.08 Manure Removal	16.67	2,501	
2.09 Insurance	4.57	686	
2.10 Herd Replacement	45.50	6,825	
2.11 Miscellaneous	5.00	750	
Subtotal Operating Costs	364.53	$54,682	
2.12 Operating Interest	15.49	2,324	
Total Operating Costs	**$380.02**	**$57,006**	
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	12.72	1,908	
3.02 Machinery & Equipment	34.13	5,120	
4. Investment			
4.01 Buildings	6.36	954	
4.02 Machinery & Equipment	12.80	1,920	
4.03 Livestock	70.00	10,500	
4.04 Pasture Land & Fencing	52.36	7,854	
Total Fixed Costs	**$188.37**	**$28,256**	
Total Operating and Fixed Costs	**$568.38**	**$85,262**	
5. Labour	90.00	13,500	
Total Cost of Production	**$658.38**	**$98,762**	

Breakeven price	$/cwt	
A. Operating Costs	$73.43	
B. Operating & Fixed Costs	$109.83	
C. Operating, Fixed & Labour Costs	$127.22	

Breakeven Price $/cwt = Cost ÷ 90% calf crop ÷ calf weight 5.75 (cwt)

Assumptions

1. This budget outlines the cost of production for a cow calf operation with 150 cows, 6 bulls and 90% calf crop weaned (assumed cow weighs 1350 lbs).
2. Building and equipment are valued at new cost.
3. All feed is valued at market value.
4. Manure removal is contracted out.
5. Replacement heifers are valued at fair market value.
6. This budget assumes an average weaning weight of 575 lbs. (Steer calves 600 lbs and heifer calves 550lbs)

Cow-Calf Production Worksheet

A. Operating Costs

1. Feed Costs

1.01 Barley (processed)

	3.0	lbs barley/cow/day	_____
x	60	days/year	_____
÷	48	lbs/bu	_____
x	$2.00	/bushel	_____
=	**$7.51**	**/cow**	_____

1.02 Hay (for cows)

	2.50	tons good quality	_____
x	$40.00	/ton	_____
=	$100.00	/cow	_____
	1.10	tons low quality	_____
x	$30.00	/ton	_____
=	$33.00	/cow	_____
Total =	**$133.00**	**/cow**	_____

1.03 Salt and Minerals

	35.00	lbs salt/cow/year	_____
x	$0.15	/lb	_____
=	$5.25	/cow	_____
	35.00	lbs mineral/cow/year	_____
x	$0.36	/lb	_____
=	$12.60	/cow	_____
Total =	**$17.85**	**/cow**	_____

2. Other Operating Costs

2.01 Straw

	1.00	tons/cow/year	_____
x	$15.00	/ton	_____
=	**$15.00**	**/cow**	_____

2.02 Veterinary Medicine & Supplies

Calf Medication

	$0.55	/calf blackleg	
x	90.00	% calf crop	
=	$0.50	/cow	

Cow Medication

	$2.00	/cow IBR	
+	$2.92	/cow Scourguard 3	
+	$7.50	/cow footrot,louse	
+	$0.64	/cow ADE	
=	$13.06	/cow	

Herd Health Program

	$90.00	/hour charge	
x	6	hours	
÷	150	cows	
=	$3.60	/cow	

Mileage

	$0.90	/km charge	
x	80	kilometres	
x	4	visits	
÷	150	cows	
=	$1.92	/cow	

Total	=	**$19.08**	**/cow**	

2.03 Breeding Costs

Feed for Bulls

Hay

	4.00	tons good quality	
x	$40.00	/ton	
x	6	bulls	
÷	150	cows	
=	$6.40	/cow	

Barley

	8.00	lbs barley/bull/day	
x	120	days	
÷	48	lbs/bu	
x	$2.00	/bushel	
x	6	bulls	
÷	150	cows	
=	$1.60	/cow	

Total	=	$8.00	/cow	

Straw for Bulls

	1.00	tons/bull/year	
x	$15.00	/ton	
x	6	bulls	
÷	150	cows	
=	$0.60	/cow	

Vet & Medicine for Bulls

	$49.00	semen test	
+	$20.00	total vet cost/bull	
x	6	bulls	
÷	150	cows	
=	$2.76	/cow	

Replacement of Bulls

	$2,200.00	bull cost	
-	$1,500.00	bull salvage value	
x	25.00	% replacement rate	
x	6	bulls	
÷	150	cows	
=	$7.00	/cow	

Investment in Bulls

	$2,200.00	bull cost	
+	$1,500.00	bull salvage value	
÷	2		
x	5.00	% investment rate	
x	6	bulls	
÷	150	cows	
=	$3.70	/cow	

Buildings & Pasture Costs for Bulls

	$52.36	/bull pasture cost	
x	6	bulls	
÷	150	cows	
=	$2.09	/cow	

Total	**=**	**$24.15**	**/cow**	

2.04 Fuel, Oil, Repairs & Maintenance

Machinery

	$1,100.00	annual fuel cost	
+	$1,000.00	oil, repairs & maintenance	
÷	150	cows	
=	$14.00	/cow	

Buildings,Fences etc.

	$1,400.00	repairs & maintenance	
÷	150	cows	
=	$9.33	/cow	

Total	**=**	**$23.33**	**/cow**	

2.05 Utilities

$2,100.00	annual cost	
+ 150	cows	
= **$14.00**	**/cow**	

2.06 Marketing & Transportation

Trucking

Calves	135	calves
x	575	lbs/calf
x	$1.25	/cwt (trucking cost)
+	150	cows
=	$6.47	/cow
Cull Cows	20	cull cows
-	2	cows died
x	$1,350.00	lbs/cow
x	$1.25	/cwt (trucking cost)
+	100	lbs/cwt
+	150	cows
=	$2.03	/cow

Selling Commission

Calves	135	calves
x	$15.75	/calf
+	150	cows
=	$14.18	/cow
Cull Cows	20	cull cows
-	2	cows died
x	$18.25	/cow
+	150	cows
=	$2.19	/cow
Total =	**$24.87**	**/cow**

2.07 Death Loss

x	$1,400.00	/cow
x	1.00	% mortality rate
=	**$14.00**	**/cow**

2.08 Manure Removal

	$2,500.00	annual removal cost
+	150	cows
=	**$16.67**	**/cow**

2.09 Insurance

	$109,156.00	building and equipment investment	
x	$0.60	/$100 capital	
÷	100	/100	
÷	150	cows	
=	$4.37	/cow	
	$30.00	liability	
÷	150	cows	
=	$0.20	/cow	
Total =	**$4.57**	**/cow**	

2.10 Herd Replacement

$1,200.00	/replacement heifer	
- $850.00	/cull cow	
x 13.00	% replacement rate	
= $45.50	**/cow**	

2.11 Miscellaneous

$750.00	total office expenses	
÷ 150	cows	
= $5.00	**/cow**	

2.12 Operating Interest

(Operating interest is charged on one half of the subtotal operating costs)

$364.53	subtotal operating costs	
÷ 2	average	
x 8.50	% operating interest	
= $15.49	**/cow**	

Capital Costs

Buildings & Water System		
Windbreak Fence	$2,380	
Feedlot Fence	$2,392	
Calf Shelters	$6,144	
Handling Facilities	$3,500	
Calving Barn (30'x32')	$9,600	
Waterers (3 @ $ 1000)	$3,000	
Pasture watering system	$4,000	
Pasture water source	$3,000	
Gates	$840	
Round Bale Feeders	$900	
Well & Pressure System	$3,500	
Hydro (6 poles @ $400)	$2,400	
Storage Bins	$3,500	
Total Building Cost	**$45,156**	
Machinery & Equipment		
Miscellaneous Machinery	$5,000	
Tractor & Loader ($100,000 @20%)	$20,000	
Bale Shredder	$12,000	
Stock Trailer	$12,000	
Truck ($30,000 @ 50%)	$15,000	
Total Machinery & Equipment Cost	**$64,000**	
Total Bldg., Mach. & Equip.	**$109,156**	
Total Breeding Herd Value	**$210,000**	
Total Capital Investment	**$319,156**	

B. Fixed Costs

3. Depreciation $\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings & Water System (not including pasture water system)

	$38,156	original cost
-	0	salvage value
÷	20	years useful life
÷	150	cows
=	**$12.72**	**/cow**

3.02 Machinery & Equipment

	$64,000	original cost
-	$12,800	salvage value
÷	10	years useful life
÷	150	cows
=	**$34.13**	**/cow**

4. Investment $\frac{\text{Original Cost + Salvage Value}}{2}$ x Investment Rate

4.01 Buildings

	$38,156	original cost	
+	$0.00	salvage value	
+	2	average	
x	5.00	% investment rate	
+	150	cows	
=	**$6.36**	**/cow**	

4.02 Machinery & Equipment

	$64,000	original cost	
+	$12,800	salvage value	
+	2	average	
x	5.00	% investment rate	
+	150	cows	
=	**$12.80**	**/cow**	

4.03 Livestock

	$1,400	/cow	
x	5.00	% investment rate	
=	**$70.00**	**/cow**	

4.04 Pasture

A. Marginal Land Investment

Land

	$5.00	acres/cow	
x	$150.00	/acre	
x	5.00	% investment rate	
=	$37.50	/cow	

Fence

	$13,440	total fence investment	
+	$0	salvage value	
+	2	average	
x	5.00	% investment rate	
÷	150	cows	
=	$2.24	/cow	

Pasture Water System

	$7,000	system & source	
+	$0	salvage value	
+	2	average	
x	5.00	% investment rate	
÷	150	cows	
=	$1.17	/cow	

Total Investment = $40.91 /cow

Depreciation				
Fence		$13,440	total fence investment	
	-	$0	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$4.48	/cow	
Water system		$7,000	system & dugout	
	-	$0	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$2.33	/cow	
Total	=	$6.81	/cow	
Taxes		5.00	acres/cow	
	x	$0.40	/acre	
	=	$2.00	/cow	
Total	=	**$49.72**	**/cow**	
B. Crop Land Investment				
Land		3.00	acres/cow	
	x	$300	/acre	
	x	5.00	% investment rate	
	=	$45.00	/cow	
Fence				
		$8,640	total fence investment	
	+	$0	salvage value	
	÷	2	average	
	x	5.00	% investment rate	
	÷	150	cows	
	=	$1.44	/cow	
Pasture Water System				
		$7,000	system & source	
	+	$0	salvage value	
	÷	2	average	
	x	5.00	% investment rate	
	÷	150	cows	
	=	$1.17	/cow	
Total Investment	=	$2.61	/cow	

Depreciation

Fence		$8,640	total fence investment	
	-	$0	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$2.88	/cow	
Water system		$7,000	system & source	
	-	$0	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$2.33	/cow	
Total	=	$5.21	/cow	
Taxes				
		3.00	acres/cow	
	x	$4.86	/acre	
	=	$14.58	/cow	
Total	=	**$67.40**	**/cow**	

C. Crown Land:
Depreciation

Fence		9.38	miles of fence	
	x	$1,920	/mile	
	=	$18,000	fence cost	
	-	$1,800	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$5.40	/cow	
Water system		$7,000	system & source	
	-	$0	salvage value	
	+	20	years useful life	
	÷	150	cows	
	=	$2.33	/cow	
Total Depreciation	=	$7.73	/cow	

Investment

Fence		$18,000	fence cost	
	+	$1,800	salvage value	
	=	$19,800	total invested	
	+	2	average	
	x	5.00	% investment rate	
	÷	150	cows	
	=	$3.30	/cow	

Pasture Water System

	$7,000	system & source	
+	$0	salvage value	
÷	2	average	
x	5.00	% investment rate	
÷	150	cows	
=	$1.17	/cow	
Total Investment =	$4.47	/cow	

Land Rental (includes taxes)

	$176	/quarter, rental rate	
+	10	cows/quarter	
=	$17.61	/cow	
Total =	**$29.81**	**/cow**	

D. P.F.R.A.: Community Pasture Grazing

Cows

	$0.35	cost/cow/day	
x	140	days	
=	$49.00	/cow	

Calves

x	$15.00	/calf/season	
x	135	calves on pasture	
÷	150	cows on pasture	
=	$13.50	/cow	
Total =	**$62.50**	**/cow**	
Average (a,b,c,d) =	**$52.36**	**/cow**	

5. Labour

	9.0	hours/cow/year	
x	$10.00	/hour	
=	**$90.00**	**/cow**	

For further information contact your local Manitoba Agriculture and Food office.

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Cow-Calf Operating Facilities